

ern coastal plain will soon be explored more thoroughly, not so much with a view of discovering new species or new stations for old ones, which has been the incentive for much of the botanical work which has been done in the past, as of determining the distribution and habitat relations of each and every species. When this is done it will perhaps not be a difficult matter to work out the historical development of the flora with some degree of accuracy.

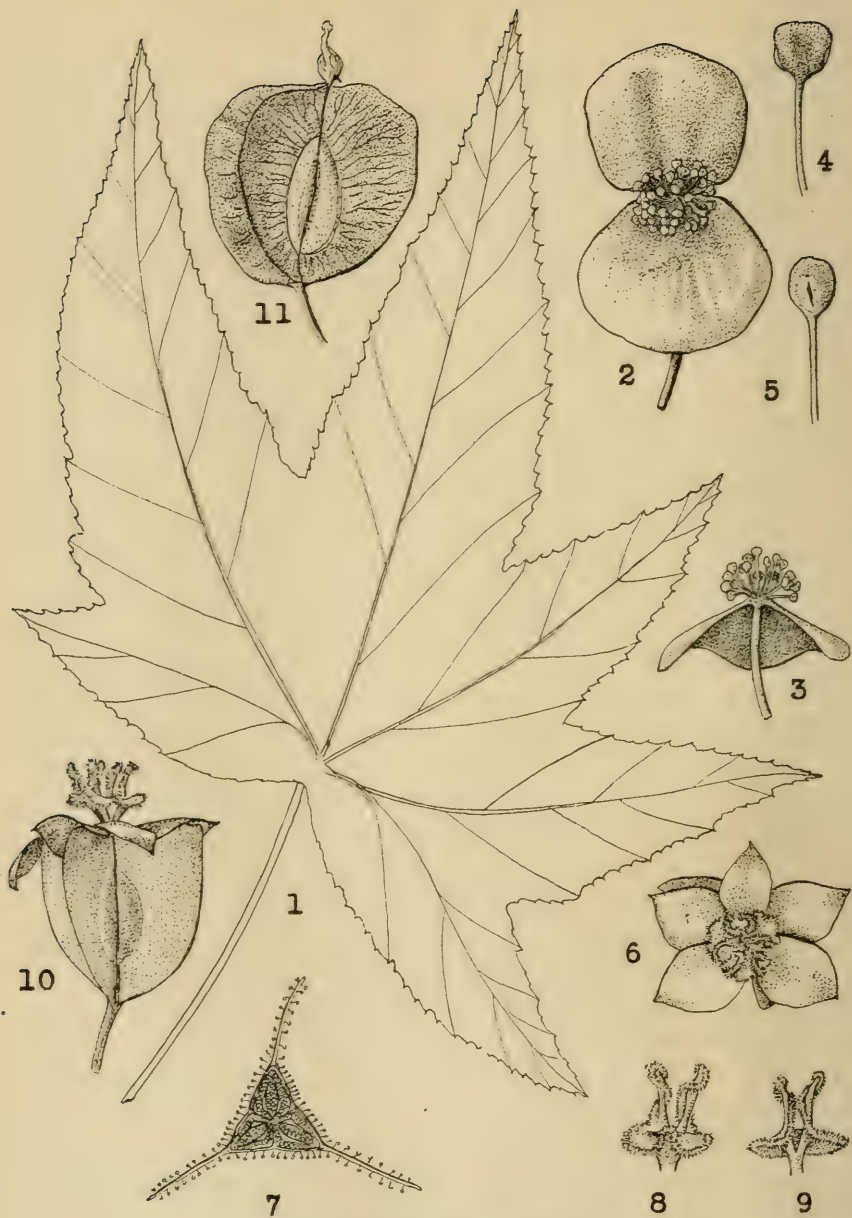
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A NEW BEGONIA FROM BOLIVIA

BY GEORGE V. NASH

During his travels in the interior of Bolivia in 1901-2, Mr. R. S. Williams found an interesting *Begonia*, of which he brought back herbarium material in fruit only. Dr. H. H. Rusby compared this material on a recent visit with the specimens in the herbarium of the Royal Gardens, at Kew, England, and could find nothing there like it. Seed, secured from the herbarium material already referred to, was sown, and in January of this year plants thence derived came into flower at the New York Botanical Garden. This has enabled me to confirm Dr. Rusby's opinion that the plant is a species hitherto unknown. As group characters in the large genus *Begonia* are based upon the structure of the flowers, it is a difficult matter without these safely to state whether a given *Begonia* is new. This plant is unusual in having the perianth in both forms of the flower of a pellucid green, a condition forming an odd and pleasing contrast with the deep orange of the anthers.

Mr. Williams informs me that he found this *Begonia* growing among moss on a damp shady bluff, a short distance to the north of the little town of San Buena Ventura. This place is at an elevation of about four hundred and twenty meters above the sea; it is located in about S. Lat. $14^{\circ} 25'$ and W. Long. $67^{\circ} 20'$, on the Beni River which joins its waters with those of the Mamore River at the southern boundary of Brazil to form the Madeira, one of the tributaries of the Amazon.



BEGONIA WILLIAMSII Rusby & Nash

1. Leaf, natural size. 2. Staminate flower, $\times 2$. 3. Staminate flower, longitudinal section through receptacle, $\times 2$. 4. Stamen, posterior view, $\times 11$. 5. Stamen, lateral view, $\times 11$. 6. Pistillate flower, $\times 2$. 7. Ovary, transverse section, $\times 4$. 8. Style, posterior view, $\times 4$. 9. Style, anterior view, $\times 4$. 10. Pistillate flower, lateral view, $\times 2$. 11. Fruit, lateral view, $\times 2$.

In the following description the characters of the plant, excepting as to its flowers, were taken from the herbarium material referred to above, Williams, *no. 600*, Nov. 14, 1901, in the herbarium of the New York Botanical Garden; the characters of the flowers were drawn from fresh material secured from the plants grown from seed, and preserved in the herbarium of the same institution.

***Begonia Williamsii* Rusby & Nash**

Stems up to 2 dm. tall, from a tuberous base. Leaves up to 8; petiole 5–7 cm. long, smooth and glabrous; blade palmately veined, smooth and glabrous on both surfaces, marked on the upper surface with silvery spots, peltate, the portion below the umbilicus to that above as 1 or 2 to 20, up to 1 dm. long, the greatest diameter up to 1.5 dm., 5–6-lobed, the lobes up to one half the diameter of the blade, lanceolate-triangular to lanceolate, acuminate, crenate, the teeth cuspidate, the basal sinus an obtuse angle, the remaining ones acute: peduncle up to 13 cm. long, glandular-pubescent with short spreading hairs, as are also the divisions of the 5-chotomous cyme and the pedicels: perianth of the staminate flowers with 2 divisions, rarely with 1 or 2 smaller narrow inner ones, pellucid, green, orbicular or nearly so, the one 1–1.25 cm. in diameter, the other slightly smaller; the stamens unequal in length, 2–3 mm. long, inserted on a somewhat convex receptacle; the glabrous filaments salmon; the anthers orange, orbicular-reniform, much shorter than the filaments, about 0.75 mm. long and 0.8–0.9 mm. wide, broadest above the middle, rounded truncate at the apex: pistillate flowers on pedicels 1–1.5 cm. long, the 5 divisions ovate to broadly ovate, acute, 5–6 mm. long and 3–5 mm. wide, the inner the narrower, the ovary 7–8 mm. long and about 3.5 mm. broad, elliptic, the median line, including the wings, about 1 cm. long, two of the wings truncate at the apex or nearly so, and narrower than the third wing which has the upper line somewhat ascending, all the wings converging toward the rounded base of the ovary, the ovary and wings glandular-pubescent, the placentas divided to the base into two somewhat curved lamellae, these ovule-bearing to the base on both sides: styles persistent, 4–5 mm. long, free or slightly united at the base, 2-branched, each branch broadened and flattened at the base and this margined by the stigmatic surface which continues spirally to the apex and is continuous at the base between the two branches, often as a pronounced undulation:

capsule, including the wings, 13-15 mm. long, 16-19 mm. wide, two of the wings semicircular or slightly bulging near the apex, the third wing with a rounded point, making it truncate on the upper side : seed oval, 0.24-0.26 mm. long and 0.15-0.17 mm. wide, brown.

It is a pleasure to name this interesting plant in honor of the collector, who spent so many months traversing the wild regions of the Andean country, and who brought back a large and valuable collection of plants.

A FUNGUS PARASITIC ON A MOSS

BY GEORGE MASSEE

Some time ago Mrs. N. L. Britton placed in my hands for examination a moss, *Weisia viridula*, collected by Mrs. A. L. Taylor, at Thomasville, Ga., which was considered to be attacked by a parasitic fungus. On examination this assumption proved to be correct. The capsule of this moss under normal conditions is usually erect and symmetrical, but when attacked by the parasite it becomes distinctly curved and unsymmetrical.

Notwithstanding the fact that over one hundred and fifty species of fungi are listed as occurring on mosses, some as parasites, others as saprophytes, the fungus under consideration belongs to *Epicoccum*, a genus not included in this list. Furthermore, the specific characters unfortunately do not conform with those of any described member of the genus, hence there appears to be no alternative to the establishment of what is usually termed "a new species," which, from its treatment of the host, must hereafter be known as *Epicoccum torquens*.

So far as observation goes *E. torquens* confines its attention to the fruit or capsule of the moss, where it forms minute, scattered or crowded, dark-colored warts.

The mycelium is strictly localized, and each pustule formed implies an independent infection; hyphae permeate the entire thickness of the wall of the capsule, but are prevented by the air cavity from reaching the spore-sac.

The genus *Epicoccum* stands in need of revision. On turning